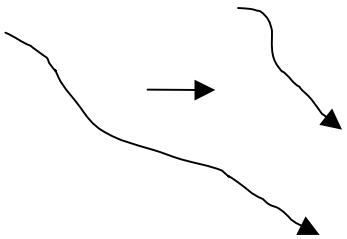
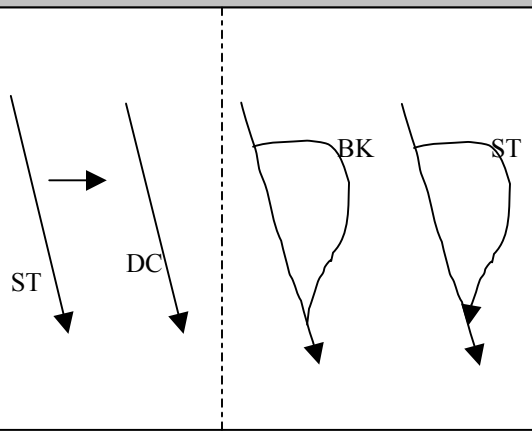
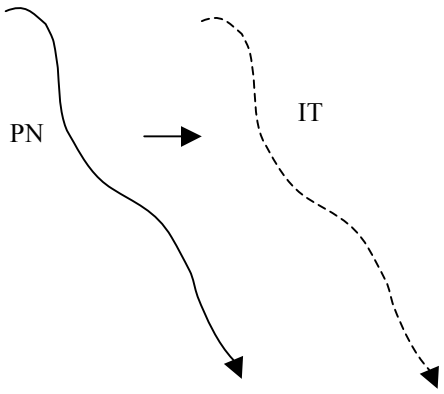
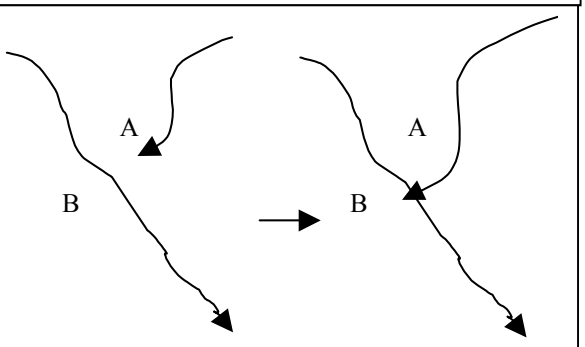
Wisconsin DNR 24K Hydrography
Data Capture and Feature-Coding Decision Rules for the Change Flag Items

Author: Andrew Selk
Wisconsin Department of Natural Resources
Bureau of Enterprise Information Technology & Applications

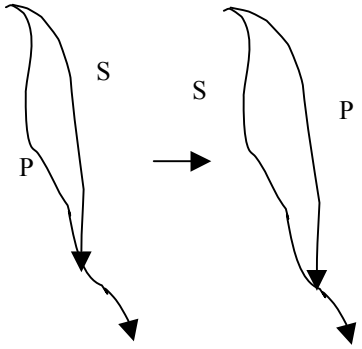
GEOMETRY Change Flag (GEOM_CHFLG)

ARCS (.AAT)	Before change -> After change
LENGTH If the length of an arc is changed from the previous release, the Geometry Flag will be populated. *In this example, an arc has been shortened; therefore, the Geometry Change Flag is populated with a 1.*	

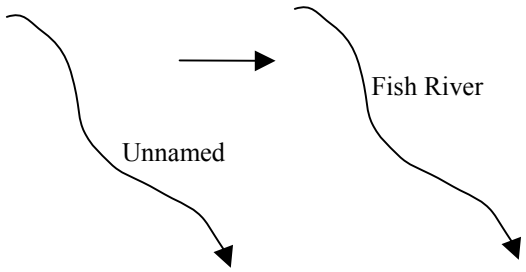
NATURAL Change Flag (NAT_CHFLG)

ARCS (.AAT)	Before Change -> After Change
LTYP XX, CW, OC, BK, BF (Non-flow arcs) <-> CL, FP, EX, CB, WG, ST, DC (flow arcs) Non-flow arcs <-> Flow arcs (When Non-flow arcs change to Flow arcs, or when Flow arcs change to Non-flow arcs, the Natural Change Flag is populated.) *In this example, a flow arc of linear_typ of ST remained a flow arc but the linear_typ changed to DC, and the Natural Change Flag was populated with 1. Also, an example of non-flow to flow is given.*	
DURATION IT, PN, FX <-> IT, PN, FX (When a duration of intermittent, perennial, or fluctuating changes to a duration of intermittent, perennial, or fluctuating.) NA<->IT, PN, FX (When a duration of not applicable changes to a duration of intermittent, perennial, or fluctuating, or vice versa) When edits are made to DURATION, Natural Change Flag is populated. *In this example, an arc was changed from DURATION = 'PN' to 'IT', populating Natural Change flag with a 1.*	
LANDLOCKED Y<->N (When landlocked equals 'Yes' changes to 'No' or vice versa) When edits are to arcs that affect LANDLOCKED, Natural Change Flag is populated. *In this example, stream A is extended to connect with stream B. Stream A therefore will no longer be LANDLOCKED and will have the NATURAL CHANGE FLAG item populated with a 1.*	

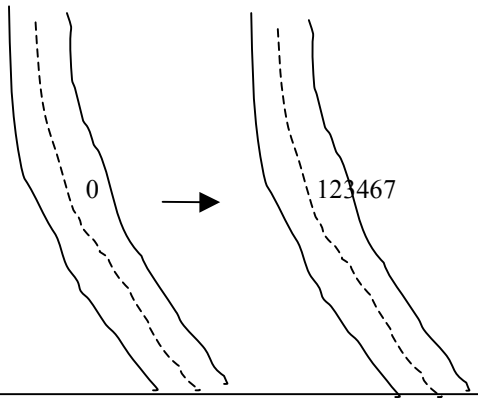
NATURAL Change Flag (`NAT_CHFLG`)

ARCS (.AAT)	Before change -> After change
FLOW SECONDARY <-> PRIMARY NA <-> SECONDARY or PRIMARY When flow is changed, the Natural Change flag is populated. *Both streams in this braided example would have their Natural Change Flag populated with a 1.*	

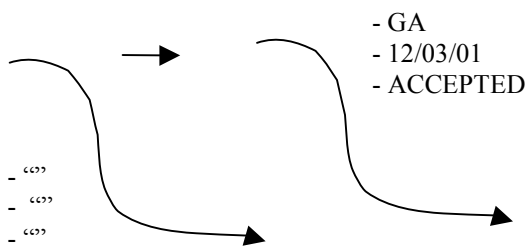
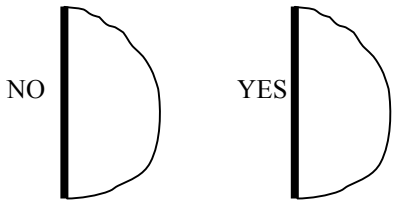
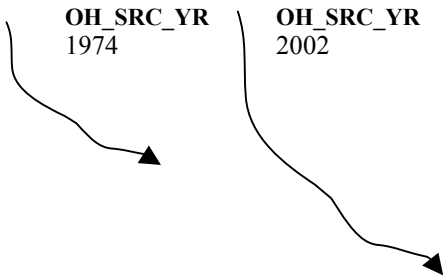
GNIS Change Flag (`GNIS_CHFLG`)

ARCs (.AAT)	Before Change -> After Change
RIVSYSNAME NAME <-> NAME/NAMED or UNNAMED <-> NA -> NAMED or UNNAMED Any changes to the RIVSYSNAME item will be flagged in the GNIS CHANGE item. *In this example, an Unnamed stream is changed to 'Walt's River' therefore populating GNIS Change Flag with a 1.*	

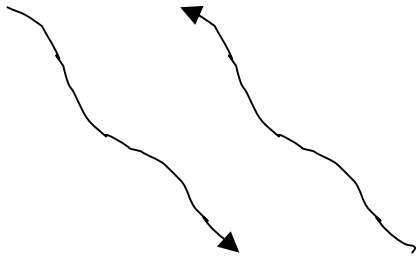
WBIC Change Flag (`WBIC_CHFLG`)

ARCS (.AAT)	Before Change -> After Change
RIVSYSWBIC WBIC <-> -1 WBIC <-> WBIC Any changes made to RIVSYSWBIC will populate the WBIC CHANGE item with a 1. *In this example, a river with no WBIC value is changed to 1234567, thus populating the WBIC Change Flag.*	

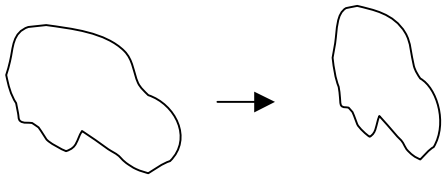
REFERENCE Change Flag (REF_CHFLG)

ARCS (.AAT)	Before Change -> After Change
WBIC_BY, WBIC_DATE, WBIC_STAT When WBIC metadata is changed, Reference Change Flag is populated with a 1. *In this example, an arc is given a WBIC therefore corresponding WBIC metadata is given to the arc.*	
QUADLINE YES<-> NO Any changes to the item QUADLINE, either from YES to NO or vice versa, will populate the REFERENCE Change Flag with a 1. *In this example, QUADLINE is changed from NO to YES.*	
OH_SRC_YR, YH_COL_MTH, OH_SRC_DNM, XREF, WGS-ID Any changes to the items listed above will populate the REFERENCE Change Flag with a 1. *In this example, the OH_SRC_YR (the original source year of the line work) was updated because a more recent USGS quad was found.*	

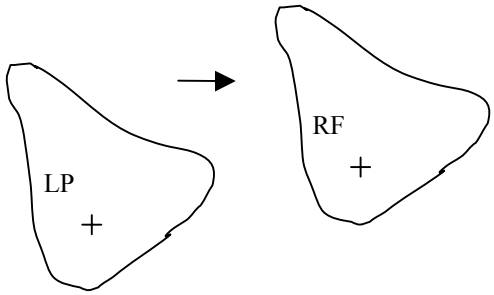
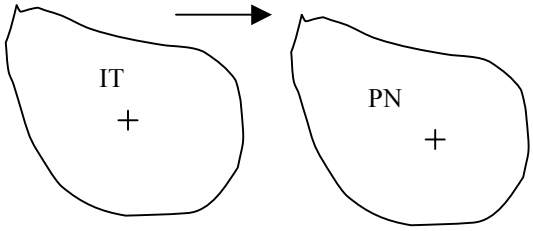
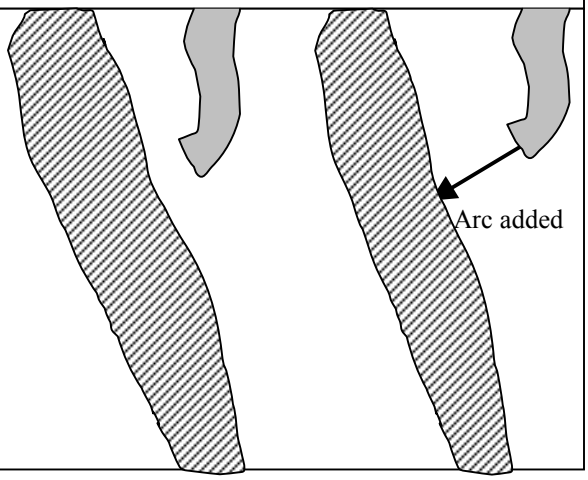
FLIP Change Flag (FLIP_CHFLG)

ARCs (.AAT)	Before Change -> After Change
An arc that is ‘flipped’ will be flagged as having a FLIP CHANGE item populated with a 1. *In this example, an arc is flipped.*	

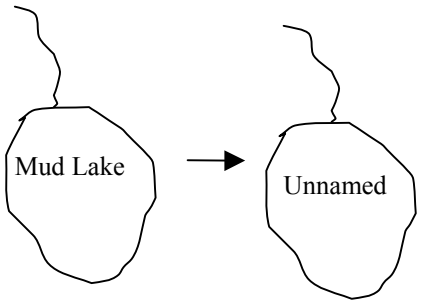
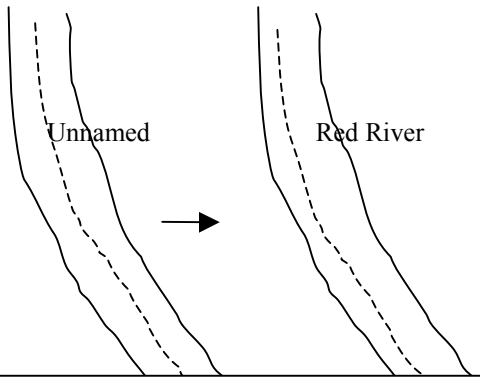
GEOMETRY Change Flag (GEOM CHFLG)

REGIONS (. PATSHAID)	Before Change -> After Change
AREA and PERIMETER Edits made to the Regions that affect AREA will be flagged in the Geometry Change item. *In this example, a lake decreases in both AREA and PERIMETER.*	

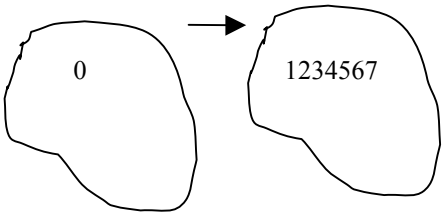
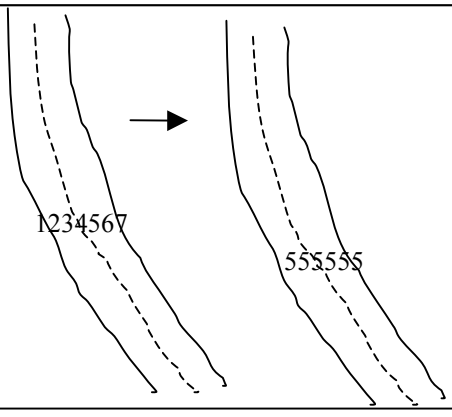
NATURAL Change Flag (NAT CHFLG)

REGIONS (.PATSHAID)	Before Change -> After Change
STYP Stype > Stype Any changes made to the Shaid_type (STYP) of a SHAID will cause the NATURAL CHANGE item to be populated. *In this example, a lake with STYP of LP is changed to RF.*	
DURATION IT,PN,FX <-> IT,PN,FX Any changes to the DURATION of the Region will cause the NATURAL Change Flag to be populated with a 1. *In this example, a lake with DURATION of 'IT' is changed to 'PN'.*	
LANDLOCKED Y<-> N (LANDLOCKED = 'YES' OR 'NO') When a landlocked feature is changed to a non-landlocked feature or a non-landlocked feature is changed to a landlocked feature, the Natural Change Flag is populated with 1. *In this example, the shaded SHAID is connected with an arc to the striped SHAID, given the shaded SHAID a landlocked value.*	

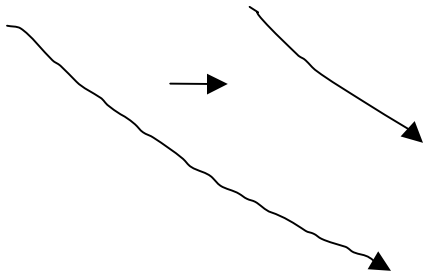
GNIS Change Flag (`GNIS_CHFLG`)

REGIONS (. PATSHAID)	Before Change -> After Change
SHAIDNAME Name <-> Unnamed Any changes to the SHAIDNAME field will populate the GNIS CHANGE item. *In this example, SHAIDNAME = 'Mud Lake' is changed to 'Unnamed'. This will cause the GNIS CHANGE item field to be flagged.*	
RIVSYSNAME Name <-> Unnamed Any changes made to RIVSYSNAME will populate the GNIS CHANGE item. *In this example, RIVSYSNAME = 'Unnamed' is changed to 'Red River'.*	

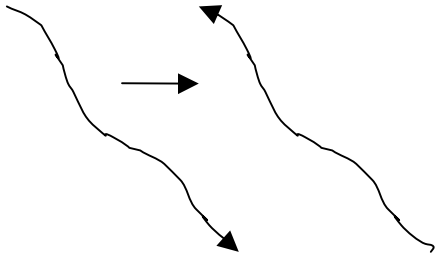
WBIC Change Flag (`WBIC_CHFLG`)

REGIONS (. PATSHAID)	Before Change -> After Change
SHAIDWBIC WBIC <-> WBIC 0 <-> WBIC Any changes made to the SHAIDWBIC value will populate the WBIC Change Flag with a 1. *In this example, a SHAID with a SHAIDWBIC value of 0 is changed to 1234567.*	
RIVSYSNAME WBIC <-> WBIC 0 <-> WBIC Any changes made to the RIVSYSWBIC value will populate the WBIC Change Flag with a 1. *In this example, a SHAID with a RIVSYSWBIC of 1234567 is changed to 555555.*	

GEOMETRY Change Flag (`GEOM_CHFLG`)

Routes (.RATSTEM)	Before Change -> After Change
LENGTH Edits made to the length of a route will cause the Geometry Change Flag to be populated. *In this example, a route is decreased in length, which will populate the Geometry Change Flag with a 1.*	

FLIP Change Flag (`Flip Flag`)

Routes (.RATSTEM)	Before Change -> After Change
Flipping a route will cause the Flip Change Flag to be populated with a 1. *In this example, a Route is flipped.*	

NEW FEATURES Flag (`NEW`)

ALL FEATURE CLASSES	Before Change -> After Change
New features will be populated with the 'New' change item with a 1. *In this example, a new lake is created.*